

PATENT ABSTRACTS OF JAPAN

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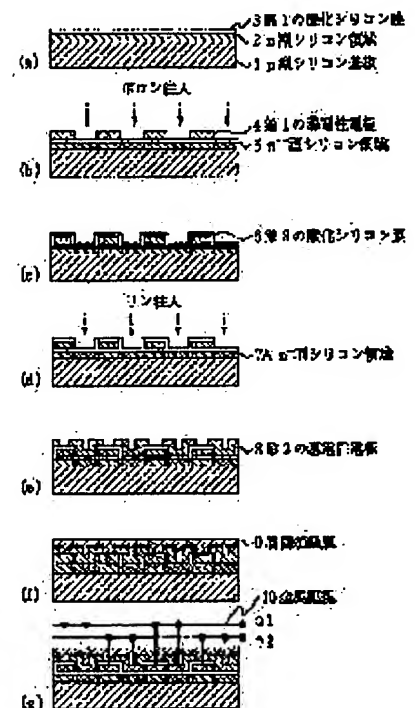
(72)Inventor : NAKASHIBA YASUTAKA

(54) CHARGE TRANSFER DEVICE, AND ITS MANUFACTURE

(57)Abstract:

PROBLEM TO BE SOLVED: To enable signal charge transfer with high transfer efficiency even at low-voltage drive and high-speed drive by restraining a cavity of potential from occurring under the gap between a first charge transfer electrode and a second charge transfer electrode, in a two-layer electrode two-phase drive system of charge transfer device.

SOLUTION: An n-type silicon region 2 and a first silicon oxide film 3 are made on a p-type silicon substrate 1 in order, and then a first conductive electrode 4 is made. With this as a mask, the ions of boron are implanted to form an n---type silicon region 5 in self alignment. A second silicon oxide film 6 is made on the first conductive electrode 4 and the n---type silicon region 5, and with the second silicon film 6 at the first conductive electrode 4 and its sidewall as a mask, phosphorous ions are implanted to form an n---type silicon region 7A in self alignment. The concentration of the n-type silicon region under the sidewall of the first conductive electrode 4 becomes higher than the concentration of other section.



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